

**RECEIVED
CENTRAL FAX CENTER****APR 18 2007** Atty. Docket No. 2003-0056-01
USSN 10/608,521**IN THE SPECIFICATION:**

On page 2, lines 26-27, please amend the following paragraph as follows:

It is well known to utilize highly reflective in applications where there is a probability of exposure to high optical fluence and over long periods of time. Such applications include, e.g., the optical pulse-stretching unit ("OpuS") contained, e.g., in an XLA-100 excimer gas discharge laser made by the assignee of the present invention. Such highly reflective mirrors and the like, e.g., interference filters and also perhaps even anti-reflective coatings, are typically made of a substrate, e.g., a fused silica substrate with a multi-layered coating of dielectric materials of, e.g., differing materials, thicknesses and densities, as is well known in the art, e.g., a high reflectivity mirror made, e.g., by Corning, as a mirror, concave, 38.1 DIA (diameter), 1.66 mR (milliradians), fused silica, part number 11290.

On page 2, lines 24 and 31, and page 3, line 4, please amend the following paragraph as follows:

A method for stabilizing a multi-layered dielectric reflectivity coating subject to compaction/densification upon exposure to deep ultraviolet (DUV) or shorter wavelength light (less than or equal to 300 nanometers in wavelength), is disclosed which may comprise: applying the coating to a substrate surface forming a coating bulk on the surface; exposing the coating bulk to a pretreatment of a sufficient amount of DUV radiation to induce sufficient densification in enough of the coating bulk to inhibit subsequent densification during continued exposure to DUV or shorter wavelength radiation. The method may also comprise the pretreatment radiation exposure amounting to energy of at least the equivalent of about 2 billion laser light pulses (Bp) at 9mJ per pulse. The method may also comprise the pretreatment radiation exposure amounting the energy being delivered in at about 3KHz pulse repetition rate. The method may also comprise the pretreatment radiation exposure amounts to energy of at least the equivalent of 15-18 mJ per pulse delivered over about 700 [[M]] million pulses (Mp).

On page 3, line 10, please amend the following paragraph as follows:

Fig. 2 shows the results of an experiment showing the results of exposure of a low density dielectric mirror sample to scattered DUV light, followed by exposure to normal air;

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On page 8, lines 11 and 15, please amend the following paragraph as follows:

Two Corning OPUS HR (highly reflective) mirrors were studied in two separate shot tests. One received 5 Bp and another received 264 Mp under the similar fluence level. The results of the two independent tests are summarized in Figures 15 and 16. In general, the reflectivity curves of the Corning mirrors appear to be more stable under the high fluence 193 nm exposure than the ARO LD (low density) and HD (high density) mirrors. Their 50% reflectivity points shift, if there is any, below the spectrometer resolution and measurement uncertainty for both cases.

On page 9, line 14, please amend the following paragraph as follows:

The above results have led applicants to conclude that a solution to the above described problems with such mirrors exposed to such fluence over long periods is to expose the mirror to direct DUV light for a relatively short number of pulses, compared to full life, e.g., for 2 billion pulses at, e.g., a 9mJ/pulse energy. For roughly double that pulse energy the exposure can be lower, e.g., about 700 Mp, i.e., at, e.g., 3KHz, exposure for several days to the DUV fluence. This can be done, e.g., prior to ever placing the mirror into its intended optical system, e.g., an OpuS on a laser system. This can be utilized to induce a pretreatment limited compaction and water vapor (and/or other contaminant) desorption.